NATURE AND THE INDIVIDUAL MIND.[1]

I. OBJECTIVE AND SUBJECTIVE.

MY body is a part of nature. My individual consciousness—on this point there can be no doubt—is absolutely dependent on the structure and development of my body, on my organisation, and consequently also on nature. Is, therefore, my ego, am I myself, only a part of nature? Or, to put it differently, how does my ego differ from nature? It will be said, by consciousness. I discover in myself mental representations, volitional impulses, and feelings; but in nature I meet with bodies and motions in space. We are simply confronted here with the old question, How can physical things be converted into psychical states? The change from one species of existence into another altogether different from it is absolutely incomprehensible. We must inquire, therefore, whether any such fundamental distinction really exists between the spatial object and its mental representation. Possibly the problems involved in the relation of nature and the individual mind will find in such an inquiry their own solution.

The moon moves about the earth, it exists. *I*,—my individual mind,—am not a condition of its movement and existence. The moon takes no account of my individual ego. This moon is called an *objective part* of nature, a body in space; and such it really is. I now look at the moon and see it. In this act both the moon and myself are necessary—a definite collocation in time and space of the moon and myself. The moon which I see is called in reference to myself a *perception*. Thirdly, and lastly, the moon is invisible.

[1] Translated from Professor Lasswitz's manuscript by Thomas J. McCormack.

I simply think of it. Here I alone am necessary and the moon not, at least not at the same time. This moon is called a *representation.* The last two moons are called *subjective* phenomena, because *I* am necessary to their production. In what respect, now, do these three moons differ from one another?

No one need see the first moon. The second, many may see together. The third, I alone see.

What is meant is this. The objective moon produces effects, or, generally speaking, is the subject of relations over which I have not the slightest control. The perceived moon cannot produce such effects, unless I tacitly introduce the objective moon in some way or other and consider more than its mere relation to myself. It is true, the existence of this subjective phenomenon is not entirely dependent on me, for the moon must be within my range of vision, but its existence is nevertheless largely co-dependent on me. The represented moon, if I disregard the fact that I must at some time or other have perceived the moon, is entirely dependent on the states which I comprehend under the name of my ego.

What are the real facts here? Does the common theory hold, that the objective moon becomes my perception or representation by having a copy or symbol of its actual existence imported into me and by its having its physical reality transformed there into psychical reality—into my mental representation? Are representations a new species of existence as distinguished from real existence? Is this the reason that the represented moon has not the same obtrusive characters of existence that the real one has? If this were the case the spatial bodily world, or nature, would undergo in the mind of man a transformation into something unspatial, the spiritual or mental. As representations, things would take on a different mode of existence. The physical would be convertible into the psychical.

In opposition to this theory I shall attempt to show that no such transformation takes place. Objective things are distinguished from their subjective representations, not by their ceasing to be corporeal, and taking on another, spiritual, form of existence. On the contrary, in both cases we are concerned with definite relations of the same kind. What takes place is this. The determined combi

nations of elements which represent things in space are altered by the reception of new elements and lose thus their distinctive character, whilst simultaneously a change also takes place in that special combination of elements called the ego. Objective and subjective are distinguished solely by their different existential contents. If our perceptions and representations appear to be altogether different, and, as they really are, more evanescent and indeterminate, as compared with objective things, the reason is that the *content* which is severally compacted and unified in them is different. The factor which alters the objective determinateness of things is combination with the countless and varying modifications which are introduced from all parts of the world into the nervous system and brain of man, and this change by the participation of the elements called the ego is our sole object of reference when we speak of representation as opposed to thing. But the *law*, or rather the conformity to law, by virtue of which the unity of things and the unity of representations originates, is the same; the two are formed at the same time, but embody only in part the same content.

After this brief provisional statement of our theory, we may enter at once into the consideration of details.

That bright, round thing which exists as the moon in the heavens, and that bright, round thing which we perceive as the moon, are one and the same. If I call the first *objective*, I do so because it is connected by law with astronomically determinable movements of the earth and the sun, and hence is known as a spherical body of this or that magnitude and composition; and in calling the second *subjective* I do so because of its connexion by law with certain physiologically determinable changes of my nervous system which I am conscious of as sensations and feelings. True, reference to nervous systems, under conditions of law, is also necessarily implied in the aforementioned objective combination, but only to the extent of its being determinable by law as a like effect on many nervous systems. If I wish to single out this latter relation, I call the moon an objective heavenly body; but if I wish to emphasise that I am considering especially a modification of *my* nervous system, together with the system of the moon, I speak of my subjec-

tive representation. The difference is not that we are concerned in the one case with sensations and in the other not; for we cannot define the objective moon without sensations. Both are real in respect of being systems, determined by law, of qualities and quantities in space; the objective moon consisting of such as are mathematically determinable a long time ahead, whilst the subjective moon involves in addition relations that depend on the individual constitution of single men, and hence can never be fully assigned. Consequently the subjective is something that is always more or less indeterminable, something that always partakes of the individual, and on this ground solely it appears as a different kind of existence—the psychical or spiritual.

The first objection we shall encounter will be to this effect. That moon, which hangs there in the heavens 360,000 kilometres from the earth, and my representation of that moon, are two different things; the one is outside in space, the other is inside in my mind.

This last we deny. They are different, it is true, yet not by their mode of spatial existence, but by the character of the elements involved. Has any one ever pictured to himself the moon otherwise than in space? The represented moon, therefore, is as much in space as the objective moon, and that which distinguishes the latter from the former is not a different kind of existence, but simply a different combination of the constituent parts of the same existence in consequence of which the one is designated objective and the other subjective. And if the objection be made: "I do not extend to the moon, how, then, can the represented moon be inside me?" I answer, if the word *I* is to mean only my body, as that is marked off in space by my skin, then I do not extend to the moon, and it is on this account that the moon is said to be "outside." But if the word *I* signifies everything that makes up the present contents of my existence, the rich total of relations by which a part of the world is so joined with me that I have experience of it, then the moon belongs just as much to me as my body does. And everything we assign to our ego in this manner, we call our representation, in order to distinguish it from that which under other condi-

tions exists without our ego. But a difference other than a difference of the mingled contents is not present.

The moon and the earth, the path of the luminous rays, and everything else that is necessary for my seeing the moon—all these elements form, together with my body, a system of law-determined relations. Exactly the same elements also form a system of relations with the body of some other man, say my neighbor, and the only difference in the two cases is, that in place of my body that of my neighbor has been substituted, and thus a few of the relations have been changed. And thus these elements, moon, earth, light, etc., form with every human body new and different systems, which contain all the first-mentioned elements under such modifications only as are required by the different human bodies distributed in space, with their various individual differences. The element "moon," which is common to all these systems remains in all these modifications the same moon, and in so far as it is determinately related to the earth, light, etc., independently of the bodies of men, it is the objective moon above in the heavens. On the other hand, in so far as it appears in any of its myriad relations to single human bodies it is the perceived moon, or, when certain other relations, given in the conditions of individual men, are added, it is simply the represented moon. When this last is the case, all determinative data are missing by which the moon's astronomical position in space for the moment is determined, phases of illumination, etc.; its constitution is almost wholly determined by states of my ego, and only a part of the elements that constitute the objective moon are present. These are not sufficient for inducing that distinctness which the object itself possesses, but they have undergone no essential alteration. Care only must be taken that the difference between objective and subjective is not found in a different species of existence, physical and mental, etc. For it is precisely the problem set us to clear up this difference between object and representation.

Our view, then, is as follows: There are not finished, perfect things of which more or less accurate copies are produced in similar finished individual minds, but there are simply law-determined

systems of relations, to which our bodies also belong. These systems are objects and at the same time they are subjects. Objective existence and subjective representation are not two different kinds of existence, but are different simply with respect to the contents of the elements associated in them. That is objective which recurs as the same content in all combinations; that same content is subjective when those relations are added that arise from connexion with the human organism. As I myself am such an organism, no combination can exist for me in which my body does not participate. The reality in which this combination is given is called *consciousness*. As this reality and the existence of our bodies are inseparable, we call ourselves conscious beings and are prone to regard this consciousness as a special kind of existence, which was originally created in us by the action of things, which in contrast to ourselves we regard as another form of existence.

But as a matter of fact, consciousness is the only form of existence we know of. The sum-total of what constitutes the existence of an object is the relations of its properties to one another, and to other things; hence this existence is of the same kind with that which we specially designate the contents of our individual consciousness. For my ego, too, consists entirely of relations between colors, sounds, magnitudes, shapes, tendencies, etc., called my representations. Without such contents the ego regarded as individual mind is impossible. The distinction between mind and body is a distinction *within* consciousness. If we call the moon a body which is defined by its position, size, weight, and motion, and which existed long before men or human consciousness existed, then, of course, the moon is declared to exist as an independent regular system, quite independently of the existence of man. But the determinative data of space, time, size, weight, etc., which represent the thing moon, are exactly the same as the data which we find now in consciousness, since men and astronomers exist. The form of consciousness we can neither take from them nor give to them. It follows, therefore, that these laws which now we have discovered to be laws of *human* consciousness, are naught else than the *universal* laws under which the development of nature proceeds

and ever has proceeded, and under which we human beings, too, have been developed. In other words, the laws under which alone nature can be represented and our own present existence in nature understood, may just as well be termed laws of nature as laws of consciousness. The two are identical.

During this process of development of consciousness, now, a separation is effected of the contents known to us as our experience. One portion proves to be largely independent of the portion which we call our body, and its occurrences are mainly recognised as conformable to law; hence its appellation *objective*. The other part, whose contents are largely modifications of our own body, cannot, in like manner, be shown to be conformable to law, except with the help of the objective; its chief distinctive feature is that the changes falling under this head are connected with feelings of pleasure and pain. For this reason the ego appears to be a unit *sui generis* as compared with the rest of contents, and hence this part of the contents of consciousness is called subjective.

The two parts, however, are not necessarily distinct; they are not given *previously* to knowledge but are originally made separable *by* knowledge. To the savage, nature is not absolutely objective and conformable to law, but is an undetermined province of experience like any other. Even the phenomena on which he habitually relies can be interrupted any moment by sorcery. Nature, as it is objectively characterised by modern science, first originated with civilisation. For example, the moon originally appears in connexion with our body as a system wherein, in the earliest stage of civilisation, the moon was not singled out as something objective. The systems "moon" and "body" were separated only after much experience—after we had discovered that we could not control the moon as we controlled our hand. Advancing knowledge constructs from the regular motions of the moon a system which is clearly distinguishable from its connexions with our individual experiences. And the development of astronomy ultimately defined in mathematical equations and measurable properties and quantities the moon as an objective heavenly body. But even this separation

is incomplete, and increases with every augmentation of our knowledge of the moon.

Knowledge, therefore, is that process, rigorously conformable to law, in which on the one hand the contents of the world take definite shape as objective occurrences of nature, and on the other as experience of the laws of the same. There remains the still unknown part of the world-content as a problem which is constantly new, as the still undetermined source of all immediate subjective experience in conscious individuals.

II. PHYSICAL AND PSYCHICAL.

A large part of the difficulties which the relation of the objective and subjective offers, rests on a conception of the nature of knowledge which may be briefly termed the dogmatic. In this conception nature is regarded as a finished and independent product, as a fixed external power. Eternally inherent in the foundations of things, this power, or unalterable complex of relations of bodies in space and time, is then contrasted with the human mind as an extraneous alien element. It has its own laws, its iron necessity of action, and to complete the contrast the human mind also is regarded as an independent power. The problem of the human mind then is to convey this rigid alien power into consciousness and to accommodate itself to it or to overcome it; the assumption being that nature, during this operation, remains without, whilst only copies or symbols, so to speak, of her existence enter consciousness. Knowledge, thus, appears as the process of transforming nature into consciousness, and knowledge of nature as a sort of repetition of nature in our mind. Laws, concepts, perceptions, are not themselves nature but merely symbolical representations of nature. The world-picture which science sketches may therefore be quite differently constituted from nature; it differs from the latter less by its imperfections than by its form, as a map differs from the real country which it represents. Man cannot transport nature into his mind, no more than he can bring a country into his room; but instead of so doing, he constructs a map, and if the map be correct he can safely act upon its information. The principle of this dogmatic

view, accordingly, is that it presupposes nature as a finished product which existed previously to knowledge and without knowledge, and that it is the task of knowledge to master it. Of course on such a supposition mind also must be regarded as a similar power independent of nature and knowledge, and it remains forever intelligible how things in space, or even trustworthy symbols of things in space, can get into the mind. This dogmatic view, according to which nature essentially exists in a finished state previous to knowledge, may assume the form of materialism or spiritualism, of monistic Spinozism or hylozoism.

As opposed to this, the critical view of nature teaches that the opposition of nature and mind, object and subject, is originally produced in and by knowledge. Knowledge in the critical philosophy is not a subjective process which takes place only in the consciousness of the individual man, but it is the necessary foundation of whatever is common to all individuals, that is the condition of all actual shaping of experience; *it* is the real process in which the development of nature and the development of the subjective mind alike are accomplished. The same laws control the mutual action of bodies in space as control our necessary representation and rational conception of them. Things are not carried into our minds from outside, producing in us copies of nature, nor do we project subjective representations outwards into space; but things and representations are the same. They arise at the same time and are differentiated simply by the different arrangement and unitary composition of their constituent parts. Our knowledge of nature is not a symbol of something unknowable outside of us, but that outside of us itself, combined with the various special changes arising because my brain and not that of another person is connected with it. My psychical experience of this piece of nature is the cerebral process involved in the connexion mentioned. And, since naturally I can have such experience only by means of my own brain, I have knowledge of it only by means of myself, and call it the consciousness of my ego. The same occurrence, viewed apart from the fact that I am the subject of it, is called the physiological brain-process. (We shall develop this point later on.) When I perceive

the moon, the moon of the heavens does not engender in my mind an image, but the moon actually constitutes, as it is seen in the heavens, a part of the relations making up my ego.

In this view nature is never a finished thing but develops along with knowledge and under the constant correction of knowledge so as to form a system which gradually taking the shape of a connected web of phenomena subject to law becomes more and more distinctly separated from the phenomena of which we have experience in the individual systems of human bodies. The latter, however, never become absolutely severed from nature ; on the contrary, our knowledge of their mode of connexion with nature increases in exactness the more rigorously the laws of the phenomena dependent on them are ascertained. As our representations grow more precise, the more precise grows the system of objective nature.

The objective reality of natural phenomena is not impugned by these considerations, but the subjective reality of the world of representations is placed on the same footing with natural phenomena, in that both are shown to be jointly involved in the same development and are not the conversion of two different kinds of existence into one another. A body is nothing but a rule or condition determining that certain changes must be effected in space, and this we call reciprocal action with other bodies, or, to use the phrase of modern science, transformations of energy. It is implied in the same condition, that if the body comes into definite spatial relation with my human body, changes are produced in my body. On the other hand, my individual mind is nothing but a similar determinative condition, requiring that an extremely large number of changes in time and space shall form a unit experienced as "ego." Among these relations of time and space is found one which constantly recurs and which I call my body. Its changes, therefore, are experienced as changes of my ego, and hence I have experience of another body acting on my human body, as a change of content of the determined state called my individual mind. This "having experience" is simply a term denoting that a change of the system called my ego is taking place. But it is not another new species of existence added to the changes of my body; and if I distinguish

this kind of experience as mental or psychical from the changes of other bodies which are conceived as physical, my distinction merely implies a different grouping of the changes of reality; physical changes being such as are accomplished without the immediate intervention of my ego.

It is impossible to describe the immediate experience which every person has of himself, and by means of which he knows that he exists, or that a given content is undergoing changes. Colors, resistances, temperatures, etc., fill space and time as the qualities of objects; this fact, and the fact of their change, coupled with the state called feeling, is "having experience." As far as our experience extends, so far our ego extends. But whence experience originates, cannot be explained, because it is the original fact to which all explanations revert; it is the given occurrence, the phenomenon, which must be assumed. Experience, therefore, is the form in which the determined contents of time and space confront us. We know it only in our individual ego and nowhere else in the world; but we have irrefutable reasons for supposing its existence in numberless other objects, and to these we give the appellation of conscious beings or individual minds.

"I am a mind," therefore, means, "I experience something." This something which I experience is called the content of my ego; it is experienced. The content and the ego are not to be separated; the one without the other is unthinkable. In so far as the content is experienced as a unit, we have an ego, a mind, a thing which does the experiencing; and in so far as all unity presupposes multiplicity, which is one by virtue of that unity, we have a content, a thing experienced. The spiritual or the mental, therefore, produces no effects in the contents of what is experienced, it is merely the point of reference, the bond of unity, by which a definite content forms the system known as my ego. But everything I have experience of, I experience exactly as the content that it is. The changes which bodies, and with them my body, mutually suffer, are the determined relations in space which we call nature. Whether they are experienced or not affects neither them nor their laws. They remain exactly what they are and what we in scientific language

understand by bodies. When they are experienced by an ego, they are not transformed into something mental, but they simply make up by their connexion with the body of a man a new content, a compound of a more evanescent and undetermined kind, whose unity with reference to bodies still remains the law, but taken by itself as ego has that compound as its content.

The fact, therefore, that the phenomenon of experience, the existence of the ego, occurs in nature's domain of law, in the time and space determined world-content, takes nothing away from the necessity of events, nor from nature's rigidity and conformity to law. But the conditions of this rigidity are not to be sought in the unity of the ego, but solely in the unity of events, by means of which bodies in their varied relations of time and space are determined without reference to the fact that they constitute parts of the content of an individual ego and are the subject of experience in that ego. Or, it may be put thus: That same determined unity of relations which we know from experience, and in so far as we have experienced it, as the individual human mind, is denominated an objective body when it is regarded without reference to its having been experienced by an ego and is to be determined solely by its reciprocal relations and actions with other spatial systems. If we wish to emphasise simply the determinateness by law of a spatial system, as is done in natural science, we call the event in question a physical one; the same event is called psychical, where, as in psychology, it is presented as a component part of the experience of an individual mind.

The reader will now perhaps have a more precise idea of what was meant when I said that things and their representations were the same, differing only by the changes due to the participation of other systems. If I am dealing with physics, I say, there are material systems which have experience of themselves, but for my present purposes they do not come into consideration in this respect. If I am dealing with psychology, I say, all things are constituent parts of some consciousness. Changes which I experience psychically in myself are physical only for a second outside observer; but in so far as changes are produced hereby in the contents of the ob-

server's system, his experience also is altered. Men act psychically on one another solely through physical means. But this does not mean that there is a transformation of psychical into physical here, or of physical into psychical, but that given connexions in space get altered, and that psychical change simply signifies that kind of change which from the point of view of the individual system occurs in that system itself. The brains of men belong to a definite connexion of things in space, which for every one of these brains is partly the same, but is also partly disturbed and differentiated by other connexions. Hence the units which experience them are in accord in a certain measure, whilst they also present the common differences which separate individuals.

When I ascribe physical and not psychical existence to the moon, I mean simply that we are concerned with definite relations which are quite independent of their being experienced by any one; and when I ascribe to my representation of the moon not physical but psychical existence, I simply mean that the aforementioned relations or parts thereof for the time being are joined with other relations which I experience as my ego. But they are on this account none the less physical even in this new connexion with the processes of my brain: and the aforementioned physical moon is none the less psychical in all cases where its objective law is *conceived* by some one. The moon is differentiated from my representation of the moon solely by the fact that now are formed into a unit just those relations which at the moment in question subsist between the condition of my nervous system and brain and the physical system moon. All this is the rigorously determined content of the system, and in so far I can call it physical; but we can just as well say it is all psychical, by experiencing that content as a unit.

If we understand by representation not the represented content but a special activity, the act of representing, it would naturally seem as if something new were added to the represented content. But this rests on an illusion. No one will find in his consciousness, besides what he is representing, say moonshine, an additional special activity of representing; he will find, perhaps, a new additional content, namely, the thought that he has before him a repre-

sentation and not an actual perception, that the moon as an actual fact is not above him in the heavens. Or, he will find, as, for example, we always do, when we are trying to remember something, a dark and obscure content, out of which some one part gradually grows more distinct. Or, he will be conscious of a feeling of effort, such as is associated with all voluntary change of representations; he finds this conation and desire itself; but all this, because he discovers it within himself, is to be denominated the content of his consciousness.

We may, indeed, unhesitatingly term the process of representation an activity because of its being associated with the feeling desiring it, with the represented aim. It would be only incorrect to maintain that we made something external internal by this representation; on the contrary all we do is to change the constituent elements of a content. We hear the sound but we cannot hear the hearing. In the act of representation, therefore, we have not to see a transformation of the temporal and spatial content of our ego by an activity of consciousness, but simply the actual process in the content, in so far as it forms a unit. If any one should say it was precisely this forming of a unity in the ego which he called the transition from the physical to the psychical, there need be no quarrelling about words. All that must be established as a matter of fact is that the expression "transition" is misleading. No change is produced in the content by consciousness except the changed arrangement of the component parts as units.

Or, perhaps the following objection will be proposed. When I look at the moon, I find in my consciousness brightness of definite form; I feel the beauty of the illuminated landscape; I have a sacred sense of rest; within me are sensations and feelings. But the physicist tells us, in space are only ether waves of definite periods of vibration, radiant energy which is transformed in the retina and in the brain into chemical processes; here there are only changes of energy in the nervous cells, expansions of the vessels, changes in the circulation of the blood. Where and how, then, does the physical of motion pass into the psychical of sensation, into feeling? For different they certainly are.

We have not expressed ourselves with sufficient clearness, if the foregoing objection appears valid. For this supposed objection is the very fact to explain which we have adduced all that has preceded, and have come to the following results.

Sensation and feeling are the content of nature as experienced when a human brain is parcel of the time and space system of law-determined phenomena. This same system is called physical whenever its law-determined connexions in space are considered without reference to their unity in an individual consciousness. It represents the relations as they must be conceived in a universal consciousness. Knowledge is the process in which multiplicity becomes unity in a universal consciousness, that is, is converted into a *content*, which as individual consciousness, as sensation and feeling of the ego, perceives itself dependent on the determinations of the universal consciousness and distinguishes this from individual experience as objective and physical.

III. THE SO-CALLED PARALLELISM.

Two students were discussing the meaning of a term in mathematics which involved the rate of increase of a sum of money the interest on which at the end of each term was compounded with the principal and then drew interest itself with the capital. One said: "Capital is a sum owing, which draws interest." "No," contended the other, "capital is a sum owed, a debt, on which interest must be paid." Which was right? Plainly both. A capital which is drawing interest is necessarily always an asset and a liability both; it must belong to somebody and it must be lent to somebody; a payment always presumes that the payment is made and received. But in the mathematical law which regulates the increase of the capital, there is contained nothing of this. For the law is not concerned with two different sums of money, but with one sum of money, which increases by a definite rule. The value of the result only is different, according as I have to pay or as I receive the same. For me, the individual, everything hangs on this condition; but the mathematical determination of the value is independent of whether I am debtor or creditor.

In like manner—for *omne simile claudicat*—it does not alter the determinative relations of things generally, whether the contents produced by such relations are objective happenings in nature or are experienced by individuals as sensations and feelings. Persons who regard the physical and the psychical as two distinct lines of development are like the person who regards a sum of money lent and its correspondent debt as two different sums of money, and who might be supposed to assume that the one was transformed into the other when possession changed. As a fact, the change consists entirely in the adoption of a new unit of reference, with which the same sum of money forms a different system. Similarly, the same change in space, if it be viewed as a determinative activity merely, is physical, but for the system changed it is psychical,—at least when this is a human brain, for otherwise we know naught about it.

That the human brain is not an apparatus in which spatial motion of molecules, or, to speak in more general terms, physical energy, is converted into sensation and feeling, is evident from the fact that this energy does not disappear as such, but is preserved in the physiological process, in the chemical transformations of the organism. When a stimulus excites our nervous system, the form of the communicated energy, it is true, is changed in the course of the nervous process. Mechanical energy is converted into thermal or chemical, and this again into mechanical, but it is always present as energy. For an outside observer who had it in his power to trace and accurately measure these transformative processes, the energy absorbed would still always be, and entirely be, energy in space. That we have during these processes the sensations of brightness or warmth, of pleasure or of pain, is an attendant phenomenon which happens as the experience of the person only in whose brain the transformations of energy considered take place. But no energy is consumed in producing this psychical effect; energy is only consumed in producing the physical effect. And this last is naught else than the quantitative spatial expression for the changes which are experienced in our individual consciousness.

It is the fundamental attribute of knowledge, its very essence in fact, that by it something undetermined is transformed into some-

thing determined. No reflexion can carry us beyond this original process; union of what is many into what is one—synthesis—is the fundamental form of all being; space, time, content, law, are its species. When masses distributed in space assume certain positions with respect to one another, this is simply the incorporation of a determinative state by the unity of a law, is synthesis, and when the results of thousands and thousands of years of human history meet in the ganglionic cells of the human brain, they, too, are compounded by law; here, too, we have synthesis. But experience shows us that this synthesis means for us sensation, feeling, or idea. The brain, therefore, is an apparatus not adapted for transforming a spatial synthesis of molecules into a psychical synthesis of representations, but it is merely that apparatus concerning which we know from self-experience that the spatial synthesis of the laws governing its motions is experienced psychically as a synthesis in consciousness. Synthesis, therefore, exhibits in this case two aspects, a physical and a psychical.

This is frequently expressed by saying that a complete *parallelism* obtains between the physical and psychical. The same event, viewed in its aspect of being determined by law, that is, viewed by an outside observer, is a physical event, but as experienced in itself as the unit of the system, it is a psychical event. Nevertheless, the term "parallelism," as expressing the relation between the physical and the psychical, is not quite apposite, and it is preferable to avoid it; the following misunderstandings being very apt to arise on the assumption of such a relation.

Starting from the assumption that physical phenomena, or, as they are commonly termed, material phenomena, are the objective facts, these phenomena are held to be the original primordial reality which lies at the foundation of all existence, whilst psychical or spiritual phenomena are regarded as the inward aspect of the same. In other words, it is assumed that matter, whether in its ultimate particles or in certain complex units and systems thereof, is ensouled, possesses, that is, attributes of the conscious order. Hence all material phenomena are in their inward selves accompanied by con-

sciousness. In this form the parallelism-theory is termed hylozoism, or empsychosis of matter.

Or, it is assumed that physical and psychical are two forms of appearance of one and the same third thing, of one and the same unknown substance, whose attributes of extension and thought only are accessible to us. The law-governed development of this substance is the world-process, which presents to us, consequently, a double aspect—that of body and mind. This form of the theory of parallelism, which is due to Spinoza, frequently bears the name of monism.

Both views are untenable, because of their dogmatic character. They assume that there exists, antecedently to knowledge, a system of law-governed, determined states, of definite content, by reason of which nature and its parallel phenomenon, consciousness, are developed. But whether such system be termed, in the language of physical science, matter and force, atoms or energy, or whether in the language of metaphysics it be termed substance, identity, or something similar, it is always erroneously assumed that knowledge is indissolubly connected with, and absolutely limited to, the outward cosmical or metaphysical order, the function of the former being that of an empirical and psychological process, and it being supposed that the latter is developed and finished prior to all experience. In such event not only is individual consciousness, the empirical ego, indissolubly connected with nature, which is a fact, but there exists no other possibility for consciousness except that of developing under the necessity of her determinations. The demands of science are perfectly satisfied by this position; but it is utterly incomprehensible how the categorical requirements of the moral law and the freedom of self-determining persons is to be reconciled with natural necessity. Ethics, æsthetics, and religion would be converted, under such dogmatic constraint, into subjective illusions. The world would get its theoretical construction, but practically it would be inaccessible.

The critical view has freed itself from this constraint. In a certain sense it is permissible also in the critical philosophy to speak of the parallelism between the physical and psychical, but

these terms must here be understood in their critical signification. Physical and psychical phenomena, it is true, appear as two sides or modes of representation of the same synthesis, that is, as combinations of the many and the one, but in such a manner that their difference is precisely marked in the character of this synthesis. Previously to this synthesis, that is, without knowledge, both things and souls, that is, both nature and individual consciousness, are out of the question. Only in experience, that is, only through knowledge, are things as yet undetermined converted into things determined, and this is true of the psychical as well as of the physical. The separation of objects and of individual consciousness is performed within consciousness itself. Thus the individual consciousness, or ego, is subject to the same law as nature; psychical and physical phenomena belong together. But consciousness is not exhausted in them; forms of consciousness remain which are not identified with natural evolution. Nature is only a part of consciousness, and like the psychical it too is content of consciousness. The psychical is distinguished from the physical simply by its being content of consciousness of an individual unit, the ego, whereas in the physical this content is determined by the objective nature of the system without regard for its possible simultaneous relation with the unity of the individual consciousness. Hence in the one case the content is *experienced*, in the other it is *known*, and the last is termed physical. In neither case are we concerned with a content which exists by itself, but the combination of the undetermined many into one initially gives rise to the content. Whether the latter receives a psychical or physical character, whether it becomes soul or thing, is contingent on the character of the content, and we have in our own body an instance of a psychically experienced content which is known at the same time as a physical content.

The term "parallelism," on the other hand, is not supposed to imply that the analogy prevailing between physical and psychical phenomena is a thoroughgoing one. The fact is, that where unity is presented in the psychical (as in subjective sensation and feeling), in the physical the process is extremely complicated; and where indeterminateness is met with in the psychical, in the physical

determinateness prevails. We cannot, accordingly, refute the theory of parallelism, by showing that no analogy prevails between the two aspects. In the psychical, for reasons which will be immediately discussed, determinative aspects of the world-content appear which are lacking to the physical, namely, all the aspects which reveal the situation of the individual as a separate unit opposed to nature, and which we experience as feelings and impulses. Special conditions must be satisfied ere the unity of a system, as determined by natural law, is so narrowed down and concentrated that it becomes conscious of itself as an individual mind. Direct experience presents this case only in the complex of our own organism. If the conditions of the aforesaid unity are not fulfilled, then the physical process is not experienced in that system and we call it an unconscious process because it is known to us only as a physical phenomenon. The unconscious or non-psychical, however, denotes nothing but separation from my individual consciousness, and not separation from the determinations of the content of a universal consciousness. Here forms of determination abide which rank above the phenomenal world, empirically known to us in individual minds; physical and psychical events in time and space may be conceived as the co-ordinated means, by which the free self-determination of persons is developed under the guidance of reason. In this way the critical view meets the requirements of scientific cognition by exhibiting nature both in physical and psychical respects as a necessary system determined by law, while it also preserves intact the freedom of persons.

IV. THE LAW OF THE THRESHOLD.

If, agreeably to the preceding remarks, psychical events also be installed as parts of the order of nature, it is incumbent upon us to clear up the peculiar difficulties which the individual mind offers on such a theory. Why is the ego experienced as an undetermined and vacillating unity, such as I know it in myself, a frail, perishable, and erring man? If psychical experience is a unit of the same kind as the physical system, but as observed so to speak merely within itself, why do I not experience *all* of nature, as it

actually is? You tell me it is the real moon which I receive into my ego in vision; consequently the whole universe must be contained in me, its laws must be clearly revealed to me, in me all life and action is, and I ought to be able to penetrate at a glance the secret of the world. Nature is a unitary coherent system determined by law; but I am ignorant of it. The movements of the atmosphere are determined by fixed relations obtaining between sun and earth, water and land; but the sailor on the storm-tossed ocean knows nothing of this necessary connexion; the result of the storm is undetermined for him, as is also his fortunate rescue in the harbor. Motions of bodies, waves of sound and light, are impinging incessantly on my body, but I notice them not, although they are certainly present. The physicist determines fractions of milligrammes with exactness, but I cannot tell by the mere weight whether you have placed one hundred or one hundred and ten grammes in my hand. The world goes its way but I sleep; or I strive hard and learn nothing. The physical unity remains preserved, the psychical does not. How is this relation of the individual ego to nature to be explained?

And further, if my individual consciousness is found to depend on nature, how am I to understand the attitude of the critical view which ascribes to personal consciousness a position above nature? Is it possible that there is a second consciousness in me besides my individual consciousness which is independent of nature? If this were so, we should have to surrender all that we have discovered to be conformable to law. Absolute anarchy would prevail in my ego, I could acknowledge in myself at will the law of nature or a power above nature. My individual ego, says the critical philosopher, is a parcel of nature, yet above it stands my free, self-determining personality. What can be the meaning of such a view? What is this personality if it be not my individual ego? What am I to understand by personality? What relation does my individual consciousness bear to this "personal" consciousness?

In the realm of natural science there are no persons, but only individuals. The natural scientist, therefore, has nothing to do with this last problem. Only when we propound the question of

the relations of natural science to ethics, æsthetics, and religion, does the notion of person enter. And to put this notion of personality, or, if we prefer it, the law of reason, in a clear light as contrasted with the law of nature which is implied in it, is the task of the critical theory of knowledge.

As regards our main theme, this task stands somewhat in the background; but we must at least make a passing reference to it. Here the great difficulty is encountered of clearly and popularly distinguishing, without undue use of technical language, the notions which, owing to insufficient abstraction, we are accustomed to associate with the words "self" or "ego" and "consciousness." Language takes her designations from direct experience, and although she gives to them metaphorical meanings when they are used to describe abstractions, yet the linguistic sense always discovers remnants of the original elements therein, which disguise or pervert the meaning of a thought. And not infrequently a suitable word is missing altogether. It may be true that often

> "Where fails the comprehension
> A word steps promptly in as deputy."[1]

but in philosophy it is usually the reverse; the ideas are there, but the word cannot be found which expresses them succinctly and lucidly.

Thus there is wanting in familiar speech a common term for the physical and the psychical. I have used the phrase "content of consciousness." I might also have employed the word "appearance" or "phenomenon." But these terms are always subject to misconstruction. In the case of content of consciousness we are always prone to think of something subjective, of the content of some *individual* consciousness. It then seems as if we desired to make something psychical out of the physical, whereas we only wish to say that they signify or involve the same content, the latter differing only in the manner of its appearance in different unities. On the other hand, if we use the word "appearance" or its common Greek form "phenomenon," we are constantly subject, in us-

[1] "Faust, Part I., Scene IV.

ing this terminology of Kant, no matter how forcibly we may struggle against it, to the misconstruction or impression that we are speaking of *appearance* only, that the phenomenon is not what had actually happened, the actually existing thing, but its mere semblance or illusion. And after we have happily explained that phenomena are designed to describe not apparent but actual experiences, the obstinate opinion is awakened that there must still be something at the basis of the phenomena which appears in them. But that again is not our meaning. As was shown above, physical and psychical are not phenomenal forms of an unknown third thing, but they are reality itself in time and space. Hence we must avoid this term and try to get along with the simple word "content."

That which distinguishes one individual from another is solely his content. The beggar and the king, the dolt and the genius, the uneducated man and the scholar, any two persons whatsoever, are different simply because different contents form coherent unities in their egos. Not the attribute ego distinguishes individuals; on the contrary the attribute ego is precisely what they have in common; the beggar and the king, Tom, Dick, and Harry, all know and are conscious of themselves as egos. What makes them not the same ego is the possession of a different time-and-space-determined content. The one lives in the dirt and squalor of the streets, is barely successful in maintaining his existence, while the circle within which his wants are included is narrow and restricted. The other lives amid the gorgeous splendor of a palace; his richness of content fairly overwhelms him; far-reaching and enormous are the effects produced when changes take place in his consciousness. These are extreme examples of the difference of content of two individuals. It is characteristic of all men, however, that a definite configuration of things in space, called the bodily organism, is part of the content of the human ego, and that everything that is to become parcel of this content must fulfil the condition of being connected with this body and with its central nervous system. This organism, whose development we can trace back to systems of a very simple order, cells and protoplasm, represents the unity of the system which we immediately experience; while the totality of the

content thus brought into the proper relation for the purpose, is our experience, and is called, in so far as it is conceived as a unit experiencing itself, our individual mind. This ego, which is consequently nothing else than a content of definitely determined states in space and time, is a part of nature in which nature experiences itself.

But it is a part only. Thus we answer the question why we do not experience nature as a law-determined system of physical changes, but simply as a vacillating psychical phenomenon. As individuals, we are such a part of nature that only quite determinate and select changes are able to modify our content. It is well known that an excitation which strikes the ends of our nerves must have a certain strength to be perceived. The least limit which must be reached in order to produce a modification in the content of our ego, that is, a modification of the organic system accompanied by consciousness, is called the threshold of excitation. The threshold varies in magnitude for different sense-organs and for different excitations, as for sound, light, heat, pressure, etc., and it even varies with individuals and with their moods and conditions. Practice reduces the threshold of excitation, increases the sharpness of the senses. Fatigue raises the threshold, while sleep augments it to such a degree that only powerful stimuli are able to cross it and reach consciousness.

A stimulus is an exchange of energy between our environment and our nervous system. This exchange is objectively immeasurable, even when subjectively we are unable to perceive it. A drop of acid in a large quantity of water is chemically detectible long before it is perceptible to the sense of taste.

And in still another manner are we insensible to changes in our environment. If we compare two different stimuli, each of which alone is perceptible, for example, a pressure of thirty and of thirty-five grammes exerted on the palm of the hand, we shall not notice that the two stimuli are different. The difference between the two must reach a certain magnitude, in our example, some ten grammes, before we are aware that we are dealing with two different excitations. The least limit in this case is called the threshold of change

of excitation. It is generally proportional to the magnitude of the stimuli, so that for example, in order to perceive any increase in a pressure of three hundred grammes, the pressure must be augmented to four hundred grammes. These two experimental facts, the existence of the threshold of excitation and of the threshold of change of excitation, are together called the law of the threshold.

This law of the threshold is simply the scientific expression of the fact that we are individual minds; in other words that the unit of which we have experience does not comprise the whole universe, but separates our ego as a distinct system from the law-determined totality of the world. Its upshot is that this special unit of which we have experience is merely a small and limited section of the total content of the world and can never comprise within itself all the relations of existence. It involves the condition, therefore, that our individual consciousness as a specific content is different from the universal determinateness of things which holds together the remotest parts of space and time; and in this manner it marks out and characterises the real difference between the physical and the psychical. Psychical, that is, our individual experience, is that portion only of the world-content which passes the threshold, and since we know that there are changes of pressure, temperature, extension, motion, etc., which we do not perceive, all such changes are called physical in contrast to psychical.

In the physical world there is no threshold. The laws of the physical world can be expressed in mathematical equations. By means of the latter we calculate the interchange of energy between the different parts of space. The laws can be determined with accuracy which apply to indefinitely small differences. It is true in every actual case finite limits are set by the conditions of the problem beyond which the calculation does not hold because of the altered conditions of the problem. But so far as the mathematical character of the quantities are concerned, no such limits exist. Pressure, temperature, volume, energy itself, can be conceived with differences which decrease indefinitely. Take the acceleration of a falling body, the augmentation of the temperature or pressure of a gas; mathematically considered such quantities are continuous,

that is, their laws still hold good, even if one of them be altered only by a vanishingly small fraction of a millimetre, degree, or milligramme. And so we assume that every change, no matter how slight, does, as a matter of fact, although inaccessible to observation, exercise its influence on all parts of the universe. Theoretically considered, the fall of a grain of sand raises its temperature, and the heat therefrom is radiated to the farthest nebulæ of the heavens. This, in fact, is the meaning of the infinite, physically necessary connexion of the All.

But this is altered when the unity of the individual mind is taken into account. The individual mind is a system which, by the law of the threshold, is cut off as a finite unity from the infinite workings of the world. The extremely small rise in temperature, for example, which the moon produces, is physically determinable, yet no man is ever directly aware of it. Doubtless it has its effects upon our body as much as upon any other; but it is not present as sensation. Every exchange of energy between our body and its environment must produce some modification in the former. Viewed in this aspect, we term such a modification, as before said, a physical change. We call such only psychical which we experience as sensation. Therefore, a part only of the energy of our nervous system goes to form that unity which has experience of itself. This part is called psycho-physical energy. The phrase indicates that this energy is physical, but at the same time that it is a modified portion of the total energy of the system, viz., that which we psychically experience. We may assume that a peculiar structure of the central nervous system, as also of the sense-organs, conditions this limitation of sensation, which we call the law of the threshold.[1]

It thus happens that we are finite minds which, as compared with a universal consciousness, have experience of fragments of the world only. In this manner our perception is restricted, more unsafe, and erring. In this manner the content which we term our ego, is undetermined. In this manner nature becomes an infinite

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[1] Compare the author's paper on "Psycho-physical Energy and Its Factors," in the *Archiv für systematische Philosophie*, Vol. I.

problem for us, whose broad conformability to law we can never approach more than approximately. In this manner our subjective knowledge of nature is distinguished from objective conformability to law, which we presuppose in nature. But on this very fact, which shuts us off as finite minds from the universe, hinges our existence as conscious beings. The law of the threshold protects us against the constant and endless inundations of stimuli that flood the universe. In the structure of the organism they are gathered together into a law-determined system which by its very restrictedness is able to be preserved as a discrete unit, such as has been developed by the interaction of cosmic stimuli. In virtue of all these we are an ego, and recognise ourselves as such in contrast to nature.

Here, too, the difference between nature and individual mind as a mere difference of contents is emphasised. In nature we have a content in which each part is determined by all the relations which it bears to all the other parts. The moon is determined by all its relations to the earth and to all the heavenly bodies, and by its relations to its own parts (that is, in its chemical and physical composition), and by its relations to all nervous systems wherever and however existing; and so forth. Thus the moon is exhaustively and necessarily determined, and that is objective nature. On the other hand, we have in our ego a content which is determined solely by a limited number of relations, namely, by such possibilities of interchange of energy as pass the threshold of this particular nervous system of mine; and thus this ego is not exhaustively determined, and thus it remains subjective experience, appurtenant to me especially, and subject to untold contingencies.

V. THE FEELING OF FREEDOM.

We have repeatedly stated that "the experiencing of a thing," in which we are accustomed to see the difference between mind and body, is merely a difference in the character of the compounded content, but induces no modification whatsoever in the real essence of the content. This fact must be borne in mind if we wish to understand the critical view. The fact of a given content forming a unit with our nervous system is identical with the fact of its being expe-

rienced; no other change is effected, so far as the space-and-time-determined condition is concerned; that bright, round object in space remains that bright, round object in space. However, a new attribute is imposed on the content, due to its forming a unit. The unity involved in this content belonging to my ego and not to another, is experienced along with the multiplicity of the content. This attribute which we experience only in ourselves is *feeling*.

By feeling we understand the consciousness of possessing a given individual content or of *being* such. The content itself in its aspect of multiplicity we call *sensations*. These, however, unlike feeling, are not merely the referring of things to the unity of the ego, but are determinative states in space and time. Bright things, smooth, heavy, warm, and sweet things have always a definite location, and are hence objective; only in so far as this location and its quality are parcel of the content of my ego, are they also subjective and specially referred to one another as *my* content. And in this unity they are experienced as mutually determinative. Herein lies the feeling of pleasure or pain. Feeling, consequently, is that by which I am distinguished from other individuals and from nature. For this new unity to which my nervous system belongs exists only once. And because precisely I am this unity, it is for me the starting-point of all existence; it is that by which I know that I am; and consequently it is that which gives *value* to existence generally.

In feeling we have the direct relation to one another of determinative states of content, which we experience in ourselves as pleasure or pain; but we are always conscious of them as connected with changes in the content. But whether a definite change of content is associated with pleasure or pain for us, depends entirely on the character and present mode of determination of the ego-content in which the change is effected. The odor of roast beef is pleasurable to a hungry man, but painful to one who has thoroughly satisfied his appetite. Moonlight fills us with pleasure during a walk at night, but it may be that in some cases we should prefer darkness. Yet the odor of roast beef remains a definite quality and moonlight likewise remains a definite quality, to be found by nat-

ural laws in a given place at a given time. By natural law my organs of sense are also in a given place at a given time; by natural laws the same sensations are experienced; and by natural laws these sensations mingle with the entire remaining part of the content of my ego and give rise to a unity which, conformably to natural law, I experience according to its constitution as pleasure or pain. Hence this feeling also is *determined* from the point of view of nature, but only as regards the last-mentioned *infinite* system. It is *undetermined*, because undeterminable, for every *finite* system; seeing that it is impossible to know the exact state of things at which the new content meets the old. And so, through feeling, we experience immediately that indeterminateness of systems which is conditioned by the law of the threshold. Accordingly feeling is the infallible sign that a given content is part of our ego. But this is an experience of an entirely different sort from considering this content under the point of view of knowledge. In the last case the connexion is theoretically determined, that is, every content is conditioned by another and is necessary as regards the whole of knowledge, but always presupposes as the condition of its existence a second preceding content. In feeling, on the contrary, the content is directly experienced as unconditioned, and so is not determined by law, although absolutely certain in itself.

On the other hand, if we consider a system, be it the moon, our own body, or that special content which we call our ego, not as directly experienced, but in its broad connexion with nature, then we are no longer concerned with feeling; the unity which now determines the connexion is the unity of law, wholly without regard to whether it is experienced or not experienced by any system. It is the inevitable consequence of the scientific mode of view that it excludes feeling from the systems investigated by it. Hence result its determinative rules regarding nature in consequence of which as compared with the individual mind it appears to be something external. As we have seen, however, this contrast, so far as regards the content of nature, is not justified. The same qualities which form our ego are likewise those that are present in nature; we simply abstract from the fact that they are associated with feelings.

As before, the objection is invalid that in nature we have ethereal vibrations and energy, while in me there are light and brightness. In fact we have overturned this objection ; the two are in me and in nature at once. What is it that is bright? Not my eye, my retina, nor my *corpora quadrigemina*, but that spot in space. Not the sensation that here there is something round, red, white, and fragrant which we call a rose—not these qualities are subjective, but only the feeling associated with them, that the content which I call my ego at any and every moment has suffered alteration in the manner described. Sensation is objective in so far as actual relations make their appearance at this definite spot of space, which bear in them the determinative conditions of round, red, white, and fragrant. But it is always tacitly involved in the assumption of these determinative conditions that they never reach their complete stage as qualities until they are brought into connexion with the sensory organs and the brain of a human being, that is to say, unless certain processes in the nervous system take place at the same time.

Owing to this limitation, qualities have been termed subjective. Yet their reality is evidently assured even without and previously to connexion with the nervous system ; only the attribute of being experienced is then lacking. This reality, independently of the nervous system, is also exhibited in various other connexions, as for example, in the biological, with the development of the stem of the rose, in physics and chemistry as a body of such and such weight, and such and such constitution ; in this last connexion with physical knowledge, it is defined as a structure of spatially determined quantities of energy. Since here all reference to the nervous system is omitted, whilst with the expressions "red" or "white" that reference is implied, the first reality is termed objective, or body, and the second is called specifically sensation. And owing to the contrast involved, sensation is termed subjective. But obviously it is as much objective as the connexions wherein energy is concerned, and is differenced therefrom solely by the fact that the latter distinguish the body "rose" as the system "rose-nature," whilst sensation, although also characterising the body "rose," marks it out as the system "rose-brain." All is a difference of content.

In the system rose-brain, the rose is experienced: the qualities red, fragrant, etc., are associated in time and space with the feeling which marks our ego as a unit. In the system rose-nature this is not the case, but there exist here the absolute conditions determining the rose as an objective body unrestricted by the law of the threshold. Sensation, however, still persists among the attributes that mark out this particular spot of space as a rose, and only its sentient aspect is missing. The law-determined connexion of qualities still endures. Yet, inasmuch as the mere assignment of quality is not sufficient for determining the parts of space in their natural connexions, physical science has resolved them into determining conditions of mainly a quantitative kind. Yet it must not be thought that on this account qualitative states have less objective reality than quantitative states; they merely, but always, signalise some possible reference to a human ego, and are consequently not determinable with sufficient distinctness by themselves.

When the same part of space is determined on the one hand (psychically) as "red," and on the other hand (physically) as an ether-vibration of 0·00007 cm. wave-length, we are not concerned with two different processes wherein the ether-vibrations are transformed in the brain into the sensation red, but merely with two different relations of the same fact. "Red" marks the relation in which the given spot in space stands to the content of an ego when the necessary connexion is established with the human brain; the vibration of the ether, on the other hand, denotes the relation in which the same spot in space stands at that moment to every other spot in space without reference to a human brain. This last relation as a mathematical determining rule is alone able to assign exact and determinate data regarding the condition of the aforesaid spot in space at the moment in question. The relation characterised by "red" does not destroy the objectivity of the state considered, but suffers it to be connected with the system called the ego, as a state of the same, which from being an individual mind is always undetermined. Hence, a scientific theory of colors was not reached until it was learned to determine colors quantitatively. But it should not be forgotten in this connexion that the character of the colored spot in

space has not been changed, and that it is unnecessary for the red to be produced by the vibration of the ether. Quite the contrary, the vibration of the ether is simply a means of defining a given spot of space as it exists under given conditions, without being obliged to take account of its special relations with a human brain.

It is, in fact, the very problem of science so to define the single contents subjectively made conscious to us in sensation, that they shall hold good and be subject to determined law as objective contents. In so doing, we do not destroy the element of sensation, we merely make ourselves independent of its connexion with feeling. When we have succeeded in defining all sensations in terms of the interchange of energy between parts of space, or, as mechanical physics strives to do, in terms of the motions of atoms, then the ideal has been reached of ascertaining changes in space without resorting to their nature as experienced in the ego. In fact, this would be a perfect ideal of natural science, for if achieved all subjective indeterminateness would be excluded. In the case of colors and sounds objective definition of this sort has been accomplished. If, now, we attempt to revert from our physical determinations as thus made, to the qualities originally sensed, it is obviously quite redundant to ask how sensation could have been generated in the brain by mechanical processes, because the mechanical processes themselves are merely the analytic product of what was originally given as sensation in such and such a spot of space and at such and such a point of time.

The further the process of objective definition is carried in science, the more distinctly the mechanism of nature is separated from the indeterminable system whose content is experienced in feeling only. In fact, the growth of science has shown that a remnant is always left over in the ego which is incapable of being resolved in the fixed terms of natural science. We have seen how, in the human organism, by the law of the threshold, a content has been marked off within nature which actually cannot be determined—namely, the individual mind, which is called an ego. But even this indeterminableness is itself nothing more than a fact; were it possible to see to the bottom of all the relations of this content, then

the whole content of an individual mind would be determined. However, this possibility is never realised.

By my having laid stress on indeterminateness as the attribute by which the psychical content of our ego is distinguished from the physical, and by my having called the individual mind in a scientific sense an undetermined system, the reader will perhaps entertain the suspicion that I have been endeavoring, on the strength of this indeterminateness of individual psychical things, to open up a back door by which to smuggle freedom of will into the necessity of nature. But this is far from my purpose and would be tantamount to a lapse into dogmatism. In nature, and hence in the individual empirical mind, there is no freedom. The individual is merely a piece of nature, and to attribute freedom to it would be equivalent to destroying nature.

Yet one gain we have made—we have explained why, despite the fact that the determinateness of nature prevails in the individual mind, we have yet the *feeling of freedom* therein. Natural necessity is assumed to assure the existence of units in time and space, and we know consciousness simply as such an experienced content in time and space. It may be called the empiric content. We are not, however, able to point out everywhere in this content of our ego the necessity of nature. And yet the ego-consciousness persists. In our empiric consciousness, therefore, natural necessity is implied as the pre-condition of the existence of our individual mind, yet only in so far as we recognise ourselves as an individual in the general connexion of nature; in other words, this necessity is the *theoretical* condition of our individual existence. Practically, however, these conditions are never perfect. If we were referred for our existence to natural necessity, if we had to demonstrate theoretically our individual existence, this latter would always remain open to question; there is no expedient for proving from natural laws that we exist because every law presumes new conditions and so reaches back indefinitely far.

Fortunately, we are never under the necessity of proving our existence to any one, as it is sufficiently assured us through consciousness—not through theoretical consciousness, but through ex-

perience. The psychological form of consciousness in which our existence is immediately known is feeling. Feeling, therefore, is a form of existence in which our individual mind is free from its determinateness by natural law. For from the point of view of nature, that is, on the ground of theoretical knowledge, infinite conditions must be fulfilled before our existence is assured; but in feeling it is assured without all those conditions being fulfilled. It is true, we do not know from this source *how* we exist, but it is simply brought to our knowledge *that* we exist. We have experience of a content without having to wait to have knowledge of it. If we make feeling itself the object of knowledge, it is necessarily determined by this fact itself; if we ask, for example, why we now have just this feeling, fear, or joy, we find that the content in question is joined with natural conditions. But the ascertaining of these conditions is not experienced; in my ego it is not present—at least, it is not present for feeling—and hence I *feel* myself free.

In other words, although theoretically I am only relatively determined as an individual, because the infinite conditions of my existence in space and time are never completely achieved, yet I find in feeling determinative grounds going to prove my existence, which are of absolute validity. Feeling, accordingly, is the sign that I am not only dependent on nature in my theoretical determination, but possess a practical determination. The determinations of consciousness are not exhausted in my empirical consciousness, but such only as are appurtenant to knowledge in space and time. Natural necessity determines *how* we must exist *if* something else exists, and again, what conditions must be fulfilled to this end, and so on *ad infinitum*; in so far it is the supposition of our existence. But it has itself a presupposition, namely, consciousness. It presupposes that consciousness exists, that there are determinative states and synthesis, and then only does it explain that our individual consciousness must be so and so, and has this or that content. It cannot, however, be theoretically shown that this presupposition is fulfilled, but we are certain of it by feeling.

There is therefore a synthesis, the self-feeling of our ego, which is itself the presupposition of nature and therefore the presupposi-

tion of our individual existence. It is to be carefully noted that no such vicious circle as the following is involved: the ego conditions nature, and nature conditions the ego. The first ego, the self-feeling ego, and the second ego, the ego conditioned by nature, are two different things. The ego conditioned by nature is our individual existence in space and time which as shown above is determined solely by its content. But the ego as self-feeling is that universal ego which is alike parcel of all individual egos however differing in their content. The empiric content only is determined by natural law, but egoness as such is an autonomous determination in consciousness whereby the determination of content (that is, of the one from the many), and hence nature, are originally possible. It affirms that individuals *shall* be; but individuals can be real only in content, in nature, in space, and in time.

Thus feeling exhibits natural necessity as a means, the object of which is the ego itself. It shows that although everything which we experience in space and time is necessarily determined as content, yet the experiencing ego as the determining unity therein is not resolved but refers its finite conditionedness to something unconditioned. Not that we could have experience of something that is not necessarily determined in nature; but our *having* experience of anything at all must repose on foundations not embraced in the necessity of nature. Otherwise it would not be intelligible how we could exist as experiencing beings and be absolutely sure of this existence, whilst yet natural necessity is never given with all its infinite conditions in the empirical consciousness.

Our existence, accordingly, must repose upon a law which is independent of the natural law that determines the content of our experience. For in determining *that* we exist, the law anticipates the aim sought, as to how we must exist. Such a law which prescribes the direction in which our experience has to develop is called an *idea*.

As the idea assigns the point of view under which experience is originally possible, it is, as accords with its character, never fulfilled. But the feeling of self is a sign that we ourselves represent such a unity in which the conformability to law that is never ac-

complished in experience is made conscious as a condition which is bound to be perfect. Such a unity which absorbs the law with the consciousness of carrying it to completion in itself is called a personality.

As a consequence of the limitations due to the law of the threshold we are individual minds, and as such, parts of nature. Yet as we grow conscious of this limitation and are still cognisant of our ego as the object for the sake of which the natural necessity controlling our individual existence is embodied in the unity of our ego, we lift ourselves above the limitations imposed by nature. We know ourselves as the unity in which an idea is being realised, to which nature is subservient as a means, and which consequently is itself determined by nothing else. This very personality has no beginning and no death, and no place in space; for time and space and the individual development of consciousness thereby conditioned exist for the self-ends of personality. Personality for this reason is never met with in the empirical realm, except in the personal belief in the reality of ethical, æsthetical, and religious self-determination of humanity.

KURD LASSWITZ.

GOTHA, GERMANY.